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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/644,284

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Brindesh Dhruva

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05/02/2005

SCHLUMBERGER-DOLL RESEARCH  
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EXAMINER

JACKSON, ANDRE K

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 05/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/644,284	<b>Applicant(s)</b> DHRUVA ET AL.	
	<b>Examiner</b> André K. Jackson	<b>Art Unit</b> 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 7, 10-13 and 16 is/are rejected.
- 7) ☒ Claim(s) 3-6, 8, 9, 14, 15 and 17-23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to because empty diagram boxes are impermissible under 37 CFR §1.83(a) which recites as follows:

*"The drawing in a nonprovisional application must show every feature of the invention specified in the claims. However, conventional features disclosed in the description and claims, where their detailed illustration is not essential for a proper understanding of the invention, should be illustrated in the drawing in the form of a graphical drawing symbol or a **labeled** representation (e.g., a **labeled** rectangular box)." (Emphasis added by Examiner)*

2. The empty diagram boxes 45, 36, 30, 23, in Figure 2; 45, 36, 30, 29 in Figure 3; 62, 23 in Figure 4; 36, 20a in Figure 7; 36, 20b in Figure 8 of the drawings, must be labeled with an appropriate descriptive phrase in addition to the reference legend already present. Appropriate correction is required.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 6, 15 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites the limitation "tool pressure" in lines 1 and 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 15 recites the limitation "the electromechanical control means" in lines 2 and 3 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 23 recites the limitation "said electromechanical control means" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim.

#### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1,2,12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Proett et al. (5644076) in view of Proett et al. (5703286).

Regarding claim 1, Proett et al. disclose in the patent entitled "Wireline formation tester supercharge correction method" providing a tool defining a probe and a variable-volume pretest cavity fluid coupled to the probe pressing the probe into contact with the mud cake (218; Figure 2B); expanding the volume of the cavity in sufficient amount to produce a break in the mud cake seal during a draw-down period (Column 3). Proett et al. do not disclose holding constant the volume of the cavity immediately after detecting the occurrence of the break in the mud cake seal for a sufficient build-up period to establish pressure equilibrium between cavity fluid and formation fluid; measuring pressure in the cavity and setting formation fluid pressure equal to the measured pressure. However, Proett et al. disclose in the patent entitled "Method of formation testing" holding constant the volume of the cavity immediately after detecting the occurrence of the break in the mud cake seal for a sufficient build-up period to establish pressure equilibrium between cavity fluid and formation fluid; measuring pressure in the cavity and setting formation fluid pressure equal to the measured pressure (Column 9, lines 1-10). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Proett et al. to include holding constant the volume of the cavity immediately after detecting the occurrence of the break in the mud cake seal for a sufficient build-up period to establish pressure equilibrium between cavity fluid and formation fluid; measuring pressure in the cavity and setting formation fluid pressure equal to the measured pressure. By adding this feature the apparatus would be able to accurately perform pressure tests on various formations.

Regarding claim 2, Proett et al. disclose where detecting the break in the mud cake seal includes measuring cavity pressure and detecting an abrupt change associated with cavity pressure (Column 2, lines 46-60).

Regarding claim 12, Proett et al. disclose an elongated body adapted for downhole operation; a probe, extendable from the elongated body, the probe defining an inflow aperture; a pretest piston pump defining a variable-volume pretest cavity coupled to the inflow aperture: a) means for expanding the-volume of the pretest cavity in sufficient amount to produce a break in the mud cake seal and b) means for detecting an occurrence of a break in the mud cake seal (Column 3, Figure 2B). Proett et al. do not disclose a means for holding constant the volume of the cavity immediately after detecting the occurrence of the break-in-the mud cake seal for a sufficient build-

up period to establish pressure equilibrium between pretest cavity fluid and-formation fluid and a pressure sensor coupled to measure pressure in the pretest cavity. However, Proett et al. disclose a means for holding constant the volume of the cavity immediately after detecting the occurrence of the break-in-the mud cake seal for a sufficient build-up period to establish pressure equilibrium between pretest cavity fluid and-formation fluid and a pressure sensor coupled to measure pressure in the pretest cavity (Column 9, lines 1-10). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Proett et al. to include a means for holding constant the volume of the cavity immediately after detecting the occurrence of the break-in-the mud cake seal for a sufficient build-up period to establish pressure equilibrium between pretest cavity fluid and-formation fluid and a pressure sensor coupled to measure pressure in the pretest cavity. By adding this feature the apparatus would be able to accurately perform pressure tests on various formations.

Regarding claim 16, Proett et al. disclose where the tool includes a constant volume flow line (Figure 2B).

7. Claims 7, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Proett et al. (5644076) in view of Proett et al. (5703286) and in further view of Desbrandes.

Regarding claim 7, Proett et al. do not disclose where detecting the break in the mud cake seal includes detecting a difference between a measured cavity pressure and a corresponding cavity pressure from a reference cavity pressure profile. However, Desbrandes discloses in the publication "Wireline formation testing" A new extended drawdown technique" where detecting the break in the mud cake seal includes detecting a difference between a measured cavity pressure and a corresponding cavity pressure from a reference cavity pressure profile (Page 41). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Proett et al. to include where detecting the break in the mud cake seal includes detecting a difference between a measured cavity pressure and a corresponding cavity pressure from a reference cavity pressure profile. By adding this feature the apparatus would be able to properly obtain a formation and permeability reading.

Regarding claim 10, Proett et al. do not disclose where the predetermined constant rate is within the range of 3-160cc/minute. However, Desbrandes et al. disclose in the publication "A new concept in wireline formation testing extended drawdown" where the predetermined constant rate is within the range of 3-160cc/mhmt (Page 4, paragraph 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify



Proett et al. to include where the predetermined constant rate is within the range of 3-160cc/minute. By adding this feature the apparatus would be able to measure permeability accurately since the constant rate would be within a particular range.

Regarding claim 11, Proett et al. do not disclose where the predetermined constant rate is approximately 5cc/minute. However, Desbrandes et al. disclose where the predetermined constant rate is within the range of 3-160cc/mhmtte (Page 4, paragraph 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Proett et al. to include where the predetermined constant rate is within the range of 3-160cc/minute. By adding this feature the apparatus would be able to measure permeability accurately since the constant rate would be within a particular range.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Proett et al. (5644076) in view of Proett et al. (5703286) and in further view of Proett et al.

Regarding claim 13, Proett et al. do not disclose where the control means includes an electromechanically driven roller screw planetary system. However, Proett et al. disclose in the publication "Supercharge pressure compensation with new wireline formation testing method" where the control means includes an

electromechanically driven roller screw planetary system (Page 3, column 1, lines 13). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Proett et al. to include where the control means includes an electromechanically driven roller screw planetary system. By adding this feature the apparatus would be able to take multiple tests during a single pad test.

9. Claims 3-5,8,9,14 and 17-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
10. Claims 6,15,23 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to André K. Jackson whose telephone number is (571) 272-2196. The examiner can normally be reached on Mon.-Thurs. 7AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the


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organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A.J.

April 22, 2005

  
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